

ABSTRACT

A gas generation system for providing a gas flow to be supplied to a reformer includes an evaporator for evaporating the components contained in a gas flow, wherein the gas flow includes at least one carbon compound, such as hydrocarbon or alcohol, and water vapor. A normalizing stage is connected between the evaporator and the reformer for equalizing the temperature distribution in the gas flow to be supplied to the reformer. The temperature of the gas flow should be equalized to a temperature range below the maximum allowable reformer inlet temperature. In this way, temperature maxima caused by a load change are equalized, thereby significantly increasing the service life of the reformer catalyst.